Harris 1
1Q/2008 Plant Inspection Findings

Initiating Events

Mitigating Systems

Significance: G Dec 31, 2007
Identified By: NRC
Item Type: NCV NonCited Violation
B Essential Services Chiller inoperable greater than TS allowed outage time
A Green self-revealing non-cited violation (NCV) of Technical Specification (TS) 3.7.13 was identified when the B essential services chilled water (ESCW) chiller tripped 2 minutes after it was started on November 5, 2007. The chiller tripped on low refrigerant pressure. The low refrigerant pressure was the result of inadequate seating of the transfer tank isolation valve after maintenance on October 13, 2007. Also contributing to the inoperability of the chiller was the fact that the post maintenance test (PMT) for the maintenance failed to verify that no leakage was occurring through the valve that was operated during maintenance. Therefore, refrigerant slowly leaked from the chiller to the transfer tank, and eventually the amount of refrigerant in the chiller was insufficient for the chiller to operate.

This finding is greater than minor because it affected the availability and reliability objectives of the Equipment Performance attribute under the Mitigating System cornerstone. Since this finding represents an actual loss of safety function of a single train of technical specification equipment for greater than it's allowed outage time, the finding was potentially greater than very low safety significance, and phase 2 and 3 analyses were required. A regional Senior Reactor Analyst performed the phase 3 evaluation under the Significance Determination Process for this performance deficiency. The results of this evaluation characterized the performance deficiency as of very low safety significance or Green. The NRC's SPAR model was used for the analysis with the test and maintenance basic event for the Division B Chilled Water Pump used as the surrogate for the performance deficiency. The basic event was set to TRUE or always failing. The dominant accident sequence was a Small Break Loss of Coolant Accident followed by a failure of the other division's Emergency Core Cooling System via various support system failures and a failure to provide alternate cooling to Division B's High Head/ Charging Pump. External event initiators were considered, but were eventually excluded from the final quantification due to the very low core damage frequency contribution from internal initiating events. The cause of this issue is associated with the Resources component of the cross-cutting area of Human Performance, in that the procedures for performing the chiller maintenance did not include adequate operator instructions regarding the proper operation of the isolation valve and adequate post maintenance testing necessary to ensure that the ESCW system would remain available following maintenance. Specifically, the incomplete procedures are related to the cross-cutting aspect of providing complete, accurate and up-to-date design documentation, procedures, and work packages, and correct labeling of components.
Inspection Report# : 2007005 *(pdf)*

Significance: G Dec 31, 2007
Identified By: NRC
Item Type: NCV NonCited Violation
Inadequate clearance for SW-271
A Green self-revealing NCV of TS 6.8.1., Programs and Procedures, was identified for an inadequate clearance order associated with engineering change 62848 on circuit 33 of power panel DP 1B-SB. As a result of the inadequate clearance, the discharge valve for the B emergency service water (ESW) pump, SW-271, would not automatically open when the B emergency service water pump was started. The clearance was inadequate because licensee operators failed to establish the proper plant equipment configuration to support hanging the clearance per procedure OPS-NGGC-1301, Equipment Clearance.

The failure to establish the proper plant equipment configuration to support the equipment clearance for engineering change 62848 is greater than minor because it is associated with mitigating systems cornerstone attribute of configuration control and affects the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences (i.e. core damage). Per NRC Manual Chapter 0609, Appendix G, Shutdown Operations Significance Determination Process, this finding is of very low safety significance (Green) because operators were able to manually open the B ESW pump discharge and valve and maintain it's functionality. This finding was related to the cross-cutting area of human performance and the associated aspect of work planning because the licensee failed to properly configure plant equipment to support the clearance for engineering change 62848.
Inspection Report# : 2007005 *(pdf)*

Significance: G Dec 31, 2007
Identified By: NRC
Item Type: NCV NonCited Violation
Loss of Annunciation System Due to Operator Error During Surveillance Testing
A Green self-revealing non-cited violation (NCV) was identified for the failure to properly implement operating procedures in accordance with TS 6.8.1. Operator error in procedure implementation of procedure OST-1858, "Remote Shutdown System Operability - Bus Drops Train A" led to the unexpected loss of power of the DP-1A-NNS bus and its associated loads, including the main control room annunciators.

The finding is greater than minor because it is associated with the Equipment Performance attribute of the Mitigating Systems cornerstones. The finding also affects the Mitigating Systems cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences (i.e. core damage). The finding was evaluated using MC-0609, appendix G, significance determination for shutdown situations. The finding is considered to have very low safety significance (Green) because the finding did not require a quantitative assessment and therefore screened as green. A quantitative assessment was not required because the finding did not cause a loss of thermal margin, a loss of inventory, or degrade the ability to add inventory to the reactor coolant system. The finding was related to the work coordination aspect of the cross-cutting area of human performance because the licensee failed to properly configure plant equipment while work was performed on the DP-1A-NNS bus.
Inspection Report# : 2007005 *(pdf)*

Significance: G Sep 30, 2007
Identified By: Self-Revealing
Item Type: NCV NonCited Violation
Operator Error During Swapping of Emergency Service Water (ESW) Suctions
A self-revealing non-cited violation (NCV) was identified for the failure to properly implement operating procedures in accordance with Technical Specifications (TS) 6.8.1. Operator error in procedure implementation led to the A-SA emergency service water (ESW) pump becoming inoperable while swapping the A-SA ESW pump suction from the auxiliary reservoir to the main reservoir.

The finding is greater than minor because it is associated with the configuration control attribute of the Mitigating Systems Cornerstone and affects the cornerstone objective of ensuring availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences (i.e. core damage). The finding was evaluated using MC 0609, Appendix A, significance determination for at-power situations. The finding is considered to have very low safety significance (Green) because loss of the safety function of the A ESW train was not greater than the allowed technical specification outage time. The finding was related to the oversight aspect of the cross-cutting area of human performance because the licensee did not adequately supervise the swapping of the ESW pumps suction source (H.4.c). (Section 4OA3)

Inspection Report# : 2007004 *(pdf)*

Significance: G Jun 30, 2007
Identified By: Self-Revealing
Item Type: NCV NonCited Violation
Failure to correct low refrigerant level in the A essential services chiller.

A self-revealing non-cited violation (NCV) of 10CFR50, Appendix B, Criterion XVI, “Corrective Action” was identified for failure to promptly correct a condition adverse to quality. The licensee failed to correct a low refrigerant level in the A essential services chiller, which led to a low refrigerant pressure trip of the chiller after it was started on April 5, 2007. The low refrigerant condition had been identified by the licensee during multiple surveillance testing opportunities prior to the chiller failure on April 5, 2007, but the licensee assigned a low priority to work activities to correct the condition. Therefore, the condition was not corrected prior to the chiller failure. The licensee entered the failure to take effective corrective actions into their corrective action program (AR 228947).

This finding is greater than minor because it affected the availability and reliability objectives of the Equipment Performance attribute under the Mitigating System Cornerstone. The finding is of very low safety significance because there was no loss of safety function of the essential services chill water system, the A essential services chiller was not inoperable in excess of its allowed technical specifications limiting condition for operation (LCO) time, and the finding is not potentially risk-significant due to external events. The system safety function was preserved by the B train of the essential services chill water system which remained operable during the period of time the A train was inoperable. The cause of the finding is related to the Thorough Evaluation of Identified Problems aspect of the Problem Identification and Resolution cross-cutting area. (Section 1R12)

Inspection Report# : 2007003 *(pdf)*

Barrier Integrity

Significance: G Dec 31, 2007
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to correct cause of SW-233 local leak rate failures
The inspectors identified a Green NCV of 10 CFR 50, Appendix B,Criterion XVI, “Corrective Actions” when licensee personnel failed to promptly correct a condition adverse to quality. Specifically, six local leak rate test (LLRT) failures occurred between 1989 and 2003 on a service water containment isolation check valve. After the sixth LLRT failure during refueling outage (RFO) 11 in 2003, the licensee initiated a corrective action to disassemble and clean the valve each refueling outage (RFO) as a preventative maintenance activity. This corrective action was not sufficient to correct the cause of the LLRT failures, because the valve failed LLRT’s during RFO 13 in 2006 and during RFO 14 in 2007.

The failure to promptly correct the cause of the SW-233 LLRT failures is more than minor because it affected the Barrier Integrity cornerstone of assuring that physical design barriers (e.g. containment) protect the public from radio nuclide releases caused by accidents or events. It is also associated with the cornerstone attribute of system, structure, component and barrier performance. Manual Chapter 0609 Appendix A, Determining the Significance of Reactor Inspection Findings for At-Power Situations, was used to evaluate the significance of this finding. Since the service water supply piping to the non-safety containment air coolers had a second, redundant and functional containment isolation valve, and since this piping is a closed system within containment, the LLRT failure of SW-233 does not represent an actual open pathway in the physical integrity of reactor containment. This finding, therefore, was determined to be of very low safety significance (Green) using the phase 1 screening worksheet for barrier cornerstones. The finding was related to the timely corrective action aspect of the cross-cutting area of problem identification and resolution due to the delays in implementing effective corrective actions.
Inspection Report# : 2007005 *(pdf)*

Emergency Preparedness

Occupational Radiation Safety

Significance: G Sep 30, 2007
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to maintain an acceptable program for periodic CCW Process Radiation Monitor calibrations in accordance with 10 CFR 20.1101
An NRC-identified non-cited violation (NCV) of 10 CFR 20.1101 was identified for failure to maintain an acceptable program for process radiation monitor calibrations in accordance with 10 CFR 20.1501(b). Specifically, the licensee failed to maintain a program for periodic calibrations required to assure acceptable operability for process radiation monitoring equipment REM-01CC-3501ASA and REM-01CC-3501BSB used to monitor the component cooling water (CCW) system for potential contamination.

The issue is greater than minor because the failure to periodically calibrate the CCW process radiation monitors could impair the licensee's ability to accurately identify, trend and take appropriate action regarding any potential inadvertent contamination of a non-radioactive system. This finding is associated with the Occupational Radiation Safety Cornerstone and adversely affects the cornerstone objective attribute to properly maintain and calibrate radiation monitoring instrumentation to support radioactive material control monitoring activities for the potential release of contaminated materials into non-contaminated areas or equipment. This finding was evaluated using the Occupational Radiation Safety Significance Determination Process (SDP) and was determined to be of very low safety significance based on operation of the CCW as a closed system and lack of identified radioactive contamination associated with system operation. The cause of this finding is related to the cross-cutting element of Problem Identification and Resolution (P.1.c). (Section 2OS3).

Inspection Report# : 2007004 *(pdf)*

Public Radiation Safety

Physical Protection

Although the NRC is actively overseeing the Security cornerstone, the Commission has decided that certain findings pertaining to security cornerstone will not be publicly available to ensure that potentially useful information is not provided to a possible adversary. Therefore, the cover letters to security inspection reports may be viewed.

Miscellaneous

Significance: N/A Aug 17, 2007
Identified By: NRC
Item Type: FIN Finding
Identification and Resolution of Problems
The inspectors determined that in general, problems were properly identified, evaluated, prioritized, and corrected within the licensee's problem identification and resolution inspection. Evaluation of issues was generally comprehensive and technically adequate. Formal root cause evaluations for issues classified as significant conditions adverse to quality were comprehensive and detailed. Overall, corrective actions developed and implemented for issues were effective in correcting problems. However, the inspectors identified a few examples where corrective actions could have been more thorough.

The processes and procedures of the corrective action program (CAP) were generally adequate; thresholds for identifying issues were appropriately low, and in most cases, corrective actions were adequate to address conditions adverse to quality. Nuclear Assessment Section audits and departmental self-assessments were effective in identifying issues and directing attention to areas needing improvement.

Management emphasized the need for staff to identify and resolve issues using the CAP. Based on discussions and interviews with plant employees from various departments, the inspectors did not identify any reluctance to report safety concerns. A safety conscious work environment was evident.

The inspectors noted two issues involving aspects related to the security program. Specific details are documented in NRC inspection report 05000400/2007404.

Inspection Report# : 2007006 *(pdf)*

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